



topics

10/10/2021

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Topics for the botanical extraction industry

Structured Data

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PDF Version of the webpage

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Currently being updated on 3/25/2021

Updating...

10/10/2021



Evaluation of Spinning Disk Reactor Technology for the Manufacture of Pharmaceuticals

This article describes a set of experiments that were performed to investigate the viability of implementing a Spinning Disk Reactor (SDR) to speed the production of pharmaceutical constituents.

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Developing Redcedar Essential Oil Market in Minnesota: Economic Opportunity for Rural Development?

This article examines the current market for Eastern Redcedar products, the availability of raw material in Minnesota, and the viability of developing industry based on Eastern Redcedar essential oil extraction.

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Evaluating the Efficiency of Wicking Bed Irrigation Systems for Small-Scale Urban Agriculture

This study explored various irrigation designs with the goal of maximizing water use efficiency when growing tomato plants on a small scale.

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Spinning Disc Reactor – A novel processing machine for the food and chemical industry

An SDR is basically, a rotating disc, that can be heated or cooled, and is fed with one or more liquids at its center- unquote. What makes it attractive to food processing is its ability to efficiently mix materials, transfer heat, and transfer mass.



Osmotic Shock Review

Osmotic shock occurs when there is a difference in concentrations on either side of a cell membrane. This membrane tries to keep the concentration of ions inside the cell constant, but when the difference is high enough the building pressure from diffusion wins and the membrane will fail. There are two ways for this to occur, with a higher concentration of ions outside the membrane, or a higher concentration of ions inside the membrane.



Supercritical CO₂ as Processing Solvent for the Recycling and Sample Preparation of Lithium Ion Battery Electrolytes

This article investigates the potential for Sub and Supercritical CO₂ to be used to extract specific constituents of lithium ion batteries (LIB).

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Extraction of Bixin from Annatto Seeds Using Supercritical Carbon Dioxide

Annatto seeds are the product of the Achiote tree, grown primarily in the southern hemisphere. They are small, bright red, and contain the pigments bixin and norbixin. Bixin and norbixin are carotenoids that vary in tone between yellow and red ... used in cheeses, sausages, meats and candies

There are three conventional means of extracting the pigments for use as natural colorants: vegetable oil extraction, alkaline solution and organic solvent extraction.



A Preliminary Study for the Evaluation of the Brain Effects

This study examined the effects of essential oil from legal ... hemp variety on the nervous system in 5 healthy volunteers.

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Effect of Polar Cosolvents on Cocoa Butter Extraction using Supercritical Carbon Dioxide

Cocoa butter, the fats and oils present in cocoa nibs, is an important ingredient in food, cosmetics, and pharmaceuticals.

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Origanum vulgare Extract and Its Major Constituents

Many spices exhibit biologically and pharmacologically beneficial properties. One such herb is Oregano.



Explosive Decompression Pretreatment: Nitrogen vs. Compressed Air

Lignocellulosic material, which composes most plant cell walls is a widely used source of biomass for energy production.

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Supercritical Fluid Extraction

Recent interest in the development of new extraction techniques is associated with the shortcomings of conventional techniques involving the extensive use of toxic organic solvents and high energy usage while providing low selectivity and low extraction yields.

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Supercritical Carbon Dioxide: A Solvent like no Other

This article discusses the benefits of replacing the widespread use of volatile organic compounds (VOCs) with the use of Supercritical Carbon Dioxide (SC-CO₂) along with the challenges presented and explores recent attempts to improve the process.

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Extraction of Caffeine from Robusta Coffee Husks Using Supercritical Carbon Dioxide

Caffeine is a widely consumed stimulant throughout the world. It is known to have both positive effects: counteracting tiredness and increased alertness; and negative effects: causing increased heartrate and blood pressure. As such, it is intentionally added to some products while being removed from others.

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Cannabinoid-Like Anti-Inflammatory Compounds from Flax

Flax is a Mediterranean plant that is already used widely for many industrial purposes, including as a source of fiber, seeds, and oil.

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Hemp Profit Gets Real

40 acres yielded 80,000 of dried industrial hemp in Kentucky in 2015. 2016 cloned 200,000 plants in 7 days, planting 65 acres. Greenhouse propagation is necessary for female plants. Female plants produce flowers, main source of CB D (no money in male plants). Flower has 71-20 percent of total CB D, but entire plant has CB D, making overall yield critical to profit. 3,000 lb per acre of dried hemp in powder form goal for 2017. Farming method mimics commercial vegetable production (cucumber setter on top of raised beds, drip table beneath plastic mulching, with annual rye sown before hemp planting to reduce erosion and control weeds in 72 inch middles).

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Atalo Grower Group Brings In \$2,000,000 Harvest in 2016

Atalo Holdings, Inc. (industrial hemp) claimed \$2 million payout to their Growers Group in 2016.

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Hemp Production Tips

Oilseed, hybrid, and fiber are the types of industrial hemp. As a short day plant, hemp develops flowers when length of day is less than 12 hours. Earlier planting is best for more veg growth, for more robust plants for higher fiber yields and seeds. Hemp is male or female (dioecious), and male plants flower and die earlier. Grows best in well-aerated loam, loose soil, with high fertility and organic matter.

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Centrifugal Liquid-Liquid Chromatography

This article compares the current state of technology relating to the many forms of chromatography as it relates to aqueous two-phase solvents (ATPS).

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